

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 26. (Canceled)

27. (Currently Amended) A telephone communication system comprising:

an analog telephone line having analog voice signals carried by a subscriber loop; and

a digital data line sharing the [[said]] subscriber loop with the [[said]] analog telephone line, the [[said]] digital data line having a digital voice channel for placing telephone voice calls.

28. (Original) The invention of claim 27 wherein the analog telephone line and the digital data line simultaneously provide two or more voice channels over the subscriber loop.

29. (Original) The invention of claim 27 wherein the analog telephone line comprises a POTS line.

30. (Original) The invention of claim 27 wherein the digital data line comprises a high-capacity digital subscriber line.

31. (Original) The invention of claim 27 wherein the digital data line comprises an asymmetric digital subscriber line.

32. (Original) The invention of claim 27 wherein the digital data line comprises multiple data and voice channels.

33. (Original) The invention of claim 27 wherein the digital data line comprises an ATM transport protocol.

34. (Currently Amended) The invention of claim 27 further comprising an interworking unit which interfaces the digital voice channel from the [[said]] digital data line into a circuit-switch protocol.

35. (Currently Amended) The invention of claim 34 wherein the [[said]] digital voice channel is carried by an ATM transport protocol.

36. (Original) The invention of claim 34 wherein the circuit-switch protocol comprises a TR-303 interface.

37. (Currently Amended) A telephone communication system comprising:

means for providing a telephone line having analog voice signals carried by a subscriber loop; and

means for providing a digital data line sharing the [[said]] subscriber loop ~~with said subscriber loop~~ with the [[said]] telephone line, the [[said]] digital line providing a digital voice channel for placing telephone voice calls.

38. (Currently Amended) The invention of claim 37 wherein the [[said]] means for providing a telephone line comprises a central office switch.

39. (Currently Amended) The invention of claim 37 wherein the [[said]] means for providing a digital data line include a digital carrier system.

40. (Original) The invention of claim 37 further comprising a means for separating analog voice signals from digital data signals.

41. (Currently Amended) The invention of claim 40 wherein the [[said]] means of separating analog voice signals includes a splitter comprising a high-pass and a low-pass filter.

42. (Currently Amended) A method of providing a digital telephone line comprising:

providing an analog telephone line with analog voice signals carried on a subscriber loop;

providing a digital data line on the [[said]] subscriber loop with the [[said]] analog telephone line, the [[said]] digital data line having a digital voice channel; and

placing a telephone voice call over the digital voice channel of the [[said]] digital data line.

43. (Currently Amended) The method of claim 42 further comprising the step of:

interfacing the [[said]] telephone voice call carried by a data protocol to a [[the]] switch protocol.

44. (Currently Amended) The method of claim 43 wherein the [[said]] step of interfacing comprises converting a telephone voice signal carried by the data protocol to the [[a]] switch protocol.

45. (Currently Amended) The method of claim 44 wherein the [[said]] step of interfacing comprises the steps of:

converting the [[said]] telephone voice call carried by the data protocol to an analog voice signal; and

converting the [[said]] analog voice signal to the [[a]] switch protocol.

46. (Original) A subscriber location for use in a telecommunication system, the subscriber location comprising:

a subscriber loop carrying an analog telephone voice line and a digital data line, wherein the digital data line comprises an asymmetric digital subscriber line having a digital telephone voice line;

a digital telephone in communication with the subscriber loop; and

a POTS telephone in communication with the subscriber loop,

wherein the subscriber location provides for separate telephone voice calls on the digital telephone and the POTS telephone over the subscriber loop.

47. (Original) The invention of claim 46 wherein the subscriber loop comprises a copper twisted pair.

48. (Original) The invention of claim 46 wherein the subscriber location further comprises:

the POTS telephone in communication with the subscriber loop via the analog telephone line;

the digital telephone in communication with the subscriber loop via the digital data line; and

wherein the analog telephone line and digital data line communicate with the subscriber loop via a network interface device.

49. (Original) A method of placing a telephone voice call over a public switched telephone network (PSTN) comprising the steps of:

providing a subscriber loop in communication with the PSTN, the subscriber loop having an analog telephone voice line and a digital data line, wherein the digital data line comprises a digital telephone voice line; and

placing a telephone voice call from a digital telephone in communication with the digital telephone voice line; and

sending the telephone voice call on the subscriber loop to the PSTN.

50. (Currently Amended) The method of claim 49, wherein the step of sending the [[a]] telephone voice call from the [[a]] digital telephone comprises converting an analog voice signal into a packetized digital data stream and sending the packetized digital data stream over a subscriber data network to the digital telephone voice line.

51. (Original) The method of claim 50, wherein the step of converting the analog voice signal comprises converting the analog voice signal into a packetized digital data stream having an asynchronous transfer mode (ATM) format.

52. (Original) The method of claim 50, wherein the step of sending the telephone voice call on the subscriber loop to the PSTN further comprises removing the packetized digital data stream from the subscriber loop and transmitting the packetized digital data stream to a switch in communication with the PSTN via a data network.

53. (Original) The method of claim 52, wherein the step of transmitting the packetized digital data stream to a switch further comprises transmitting the packetized digital data stream to a data access tandem switch, and converting a protocol of the packetized digital data stream to a protocol of the switch in communication with the PSTN, whereby the telephone voice call placed on the digital telephone is transmitted over the PSTN.

54. (Original) A telephone communication system comprising:
at least one digital telephone in communication with a digital telephone voice line on a digital data line; and
at least one POTS telephone in communication with an analog telephone line;
a network interface device connected to a subscriber loop, wherein the network interface device comprises a signal splitter configured to combine telephone voice signals received from the analog telephone line and digital data line onto the subscriber loop and separate telephone voice signals received from the subscriber loop onto an appropriate one of the analog telephone line and digital data line;
the subscriber loop carrying the digital data line and the analog telephone line on a common communication medium; and
a central office switch configured to communicate with the subscriber loop, the central office switch having a splitter for separating signals on the subscriber loop into analog telephone line telephone voice signals and digital data line signals, wherein the digital data line signals comprise digital telephone voice line voice signals.

55. (Currently Amended) The invention of claim 54, wherein the central office switch further comprises a local telephone switching device in communication with the splitter ~~switching device~~, the local telephone switching device configured to receive the analog telephone line voice signals for transmission over a public switched telephone network (PSTN).

56. (Original) The invention of claim 55, wherein the central office switch further comprises a digital subscriber line access multiplexer in communication with the splitter for multiplexing the digital data line signals into a format for transport over a data network.

57. (Original) The invention of claim 56, further comprising a tandem location in communication with the data network, the tandem location having an interworking unit comprising a protocol switch configured to convert digital telephone line voice signals from the format for transport over the data network into a format for transport over the PSTN.

58. (Original) The invention of claim 57, wherein the format for transport over the PSTN comprises TR-303.

59. (Original) The invention of claim 54, wherein the common communication medium comprises a copper twisted pair.

60. (Original) The invention of claim 59, wherein the digital data line is an asymmetric digital subscriber line (ADSL) having an asynchronous transfer mode (ATM) transmission protocol.

61. (Original) The invention of claim 54, wherein the signal splitter of the network interface device comprises a low pass filter connected to the analog telephone line and a high pass filter connected to the digital data line, whereby the high pass filter is configured to pass an asymmetric digital subscriber line digital signal carrying a telephone voice call to the digital telephone and the low pass filter is configured to pass a POTS telephone call to the POTS telephone.